

REMARKS/ARGUMENTS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks.

Claims 1-7 and 15-21 were pending prior to the Office Action. Claims 3, 6 and 19 are canceled without prejudice or disclaimer, and claims 22-29 are added. Therefore, claims 1-2, 4-5, 7, 15-18 and 20-29 are pending. Claims 1, 15, 18 and 21 remain independent.

In a non-limiting aspect, presently pending claims are directed to accomplish a handover of a mobile terminal from a public mobile network to an unlicensed access network. The access network is unlicensed in a sense that the local base stations of the unlicensed access network can wirelessly communicate with mobile stations using radio protocol that does not require a license from a regulatory body to operate the access network. Bluetooth is such an example. *See e.g., disclosure, p.8, ll.11-25.* However, the unlicensed access network itself is viewed as a part of public mobile network from the perspective of the core network.

The nature of an unlicensed access network is that local base stations such as access points may vary in number, be arranged at widely spaced locations and may be added or removed frequently. One resultant problem in implementing the handover from the public mobile network to the unlicensed network is how to identify the target mini-cell for the handover to/from the elements of the public mobile network, without conducting a time consuming

and costly configuration of these elements and frequent reconfiguration of these elements as the mini-cells are added and removed.

This problem is solved according to the present claims by assigning all mini-cells of the access network the same, common identifier associated with the access network controller. In effect, the whole unlicensed access network or the controller controlling unlicensed access network is assigned a single cell identification, i.e., a cell address, that identifies a cell of the public mobile network. As a non-limiting example, the cell identification is equivalent to a cell global identifier CGI used in a GSM network. *See e.g., disclosure, p. 12, l.25 – p. 13, l.9.* In reference to Fig. 2, the unlicensed access network 30 as a whole appears as a single cell of the public mobile network to the core network portion 20.

The common identifier identifies a single cell address known to the core network. That is, the single cell address of the access network is a cell address of the public mobile network assigned to the access network such that the access network is a single cell of the public mobile network from the perspective of the core network.

By limiting the unlicensed network to configuration to a single identifier, the impact on the public mobile network is minimized. Referring back to Fig. 2, the MSC 202 and the SGSN 203 treats the handoff of the mobile station 1 to the unlicensed access network 30 as a normal handoff from one cell to a neighboring cell, where both cells are part of the public mobile network.

The task of identifying which of the multiple mini-cells is the target for handover falls to the access network controller such as the HBSC 303. The task is achieved by the access network controller assigning a handover reference to a handover request received from the core network and using the handover reference to identify the mini-cell when the handover reference is received from a mobile station. Communication is then enabled with this mobile station through the target mini-cell. *See e.g., disclosure, p. 14, l.18 – p.16, l.27.* The combination of the assignment of a common identifier with the use of a handover reference to enable the identification of the target mini-cell allows the unlicensed access network to be integrated in a public mobile network in a manner that minimizes the impact on the existing network while ensuring seamless service for the user.

Examiner contends that Gallagher teaches all features of independent claims 1, 15, 18 and 21 with the exception of the assignment of a common identifier to all mini-cells in which the common identifier is associated the access network controller. Examiner then contends that the common identifier feature is taught in Monin and that incorporating Monin into Gallagher is obvious.

On the contrary, Monin is directed exclusively to access points within a WLAN and to handover between access points of the WLAN. That is to say, Monin is purely directed to handovers within an unlicensed network, i.e., between access points of the WLAN. Monin describes separating logical

identities of the access points from their physical identities. In Monin, the central network control unit assigns different logical identities to the various access points at different times. The logical identities are assigned from one access point to another tracking the movement of the mobile station as it roams within the WLAN. In effect, the cell moves along with the mobile station. Monin touts this “roaming cell” as an advantage over conventional handovers in that the mobile station is freed from actively participating in the handover process. *See [0024].*

While Monin describes handovers among access points within an unlicensed (e.g., WLAN) network, Monin clearly lacks any insights regarding interactions between a licensed (public mobile) network and unlicensed (e.g., WLAN) network. The logical identities that move about the access points is, at best, applicable only within the WLAN network. There is no indication that the logical identity is known outside of the WLAN. In short, Monin does not teach or suggest the feature of a common identifier that identifies a single cell known to a core network. Monin does not teach or suggest that the single cell address is a cell address assigned to an access network such that from a perspective of a core network, the access network is a single cell of the public mobile network.

Since neither Gallagher nor Monin discloses these features, Gallagher and Monin combined also cannot disclose these features. For this reason alone, independent claim 1 is distinguishable over Gallagher and Monin. For similar reasons, independent claims 15, 18 and 21 are also distinguishable

over Gallagher and Monin. Claims 2, 4-5, 7, 16-17 and 20 are distinguishable over Gallagher and Monin by virtue of their dependencies from independent claims as well as on their own merits.

Applicants respectfully request that the rejections of claims based on Gallagher and Monin be withdrawn.

Claims 22-29 are added. No new matter is raised. Applicants submit the new claims are distinguishable over applied art of record by virtue of their dependencies from independent claims as well as on their own merits. Applicants respectfully request that the new claims be allowed.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a three (3) month extension of time for filing a reply in connection with the present application, and the required fee is attached hereto.

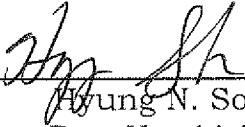
AMENDMENT
U.S. Application No. 10/588,658

Atty. Docket No.: 4144-7
Art Unit No.: 2617

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Respectfully submitted,

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